

# PATENT SPECIFICATION

Application Date: Sept. 15, 1937. No. 25051/37.

500.378

Complete Specification Left: Sept. 15, 1938.

Complete Specification Accepted: Feb. 8, 1939.

9. MRZ



## PROVISIONAL SPECIFICATION

### Improvements relating to Tiles for use in Sewage Filters

I, JOHN EDWARD TUCKER, of British Nationality, of 104, West Campbell Street, Glasgow, C.2, do hereby declare the nature of this invention to be as follows:—

This invention relates to sewage filter beds of the type including a lateral wall which is generally circular, a floor, a plurality of filter tiles, a mass of filter media accommodated within the space bounded by lateral wall and supported by the floor and a plurality of tiles interposed between the media and the floor.

In connection with filter beds of this type it has been usual to employ arcuate tiles composed of fireclay. Such tiles do not present a continuous flat surface for reception of the media and the provision for aeration below such tiles is generally found to be inadequate.

The present invention consists in an improved tile for filter beds comprising, essentially, a rectangular arch presenting a substantially flat upper surface and per-

pendicular sides defined by pillars affording space for aeration within the arch and between adjacent associated tiles, a plurality of ribs incorporated in the span of the arch and defining self-cleaning apertures and metallic reinforcement in the form of rods submerged in the ribs, in the sides, and extending down the pillars.

In the assembly of a group of tiles constructed as described the lateral faces enter into substantially close contact with one another and the assembly presents an uninterrupted substantially flat surface for reception of the media. Where the filter bed is provided with channels, the pillars are so arranged as to straddle the channels.

Dated this 14th day of September, 1937.  
CRUIKSHANK & FAIRWEATHER,  
86, St. Vincent Street, Glasgow, and  
65/66, Chancery Lane, London, W.C.2,  
Agents for the Applicant.

## COMPLETE SPECIFICATION

### Improvements relating to Tiles for use in Sewage Filters

I, JOHN EDWARD TUCKER, of British Nationality, of 104, West Campbell Street, Glasgow, C.2, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to sewage filter beds of the type including a lateral wall which is generally circular, a floor, a plurality of filter tiles, a mass of filter media accommodated within the space bounded by the lateral wall and supported by the floor and a plurality of tiles interposed between the media and the floor.

In such filter beds it has been proposed to employ tiles, each comprising a rectangular arch presenting a substantially flat upper surface and perpendicular sides defined by pillars affording space for aeration within the arch and between adjacent associated tiles and a plurality of ribs incorporated in the span of the arch. In patent specifications Nos. 8590/08 and 16,228/10 it has been pro-

posed in the manufacture of tiles as described to utilise reinforced concrete.

The present invention consists in the incorporation in tiles of this type of metallic reinforcement in the form of rods submerged in the ribs, in the sides and extending down the pillars.

In the accompanying drawings which illustrate a tile constructed in accordance with the invention Fig. 1 is a plan view, Fig. 2 a section on the line A—A of Fig. 1, and Fig. 3 a section on the line B—B of Fig. 1. Fig. 4 is a perspective view of an assembly of tiles.

The tile shown comprises a rectangular arch presenting a substantially flat upper surface 1 and perpendicular sides defined by pillars 2 affording at 3 space for aeration within the arch and between adjacent associated tiles. A plurality of ribs 4 incorporated in the span of the arch define apertures 5. 6 denotes metallic reinforcement in the form of rods submerged in the ribs 4, in the sides, and extending down the pillars 2.

[Price 1/-]

BEST AVAILABLE COPY

In the assembly of a group of tiles as illustrated in Fig. 4 the lateral faces enter into substantially close contact with one another and the assembly presents an uninterrupted, substantially flat surface for reception of the media. Where the filter bed (not shown) is provided with channels, the pillars are so arranged as to straddle the channels.

10 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

15 A tile adapted for incorporation in a sewage filter bed of the type referred to

and comprising a rectangular arch presenting a substantially flat upper surface and perpendicular sides defined by pillars affording space for aeration within the arch and between adjacent associated tiles, a plurality of ribs incorporated in the span of the arch and defining apertures and characterised by the feature that rods constituting metallic reinforcement are submerged in the ribs, in the sides, and extend down the pillars.

Dated this 14th day of September, 1938.  
 CRUIKSHANK & FAIRWEATHER,  
 86, St. Vincent Street, Glasgow, and  
 65/66, Chancery Lane, London, W.C.2,  
 Agents for the Applicant.

Leamington Spa: Printed for His Majesty's Stationery Office, by the Courier Press.—1939.

*[This Drawing is a reproduction of the Original on a reduced scale.]*

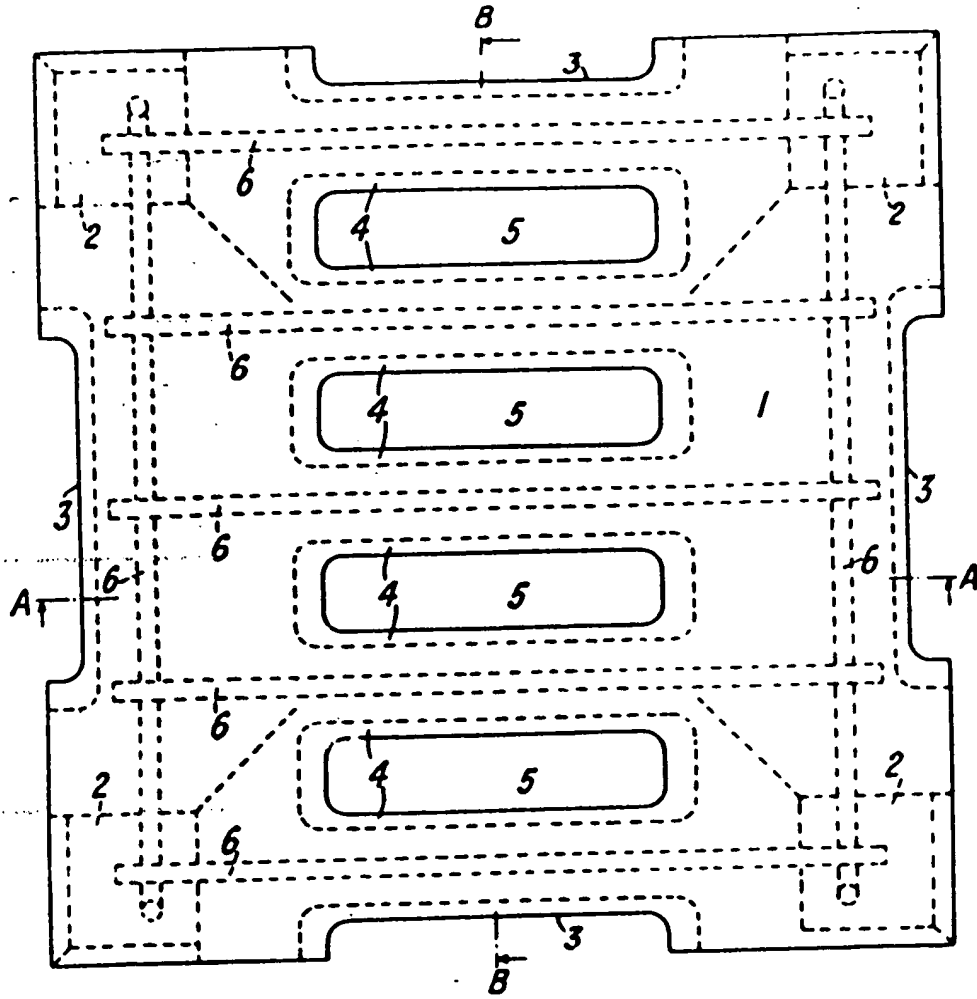


FIG. 1.

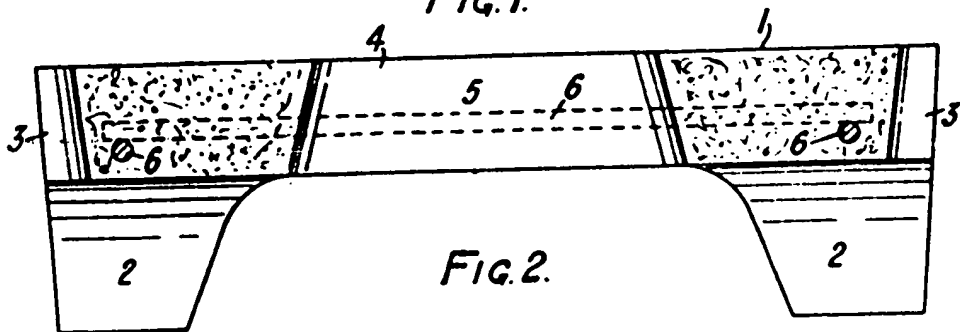


FIG. 2.

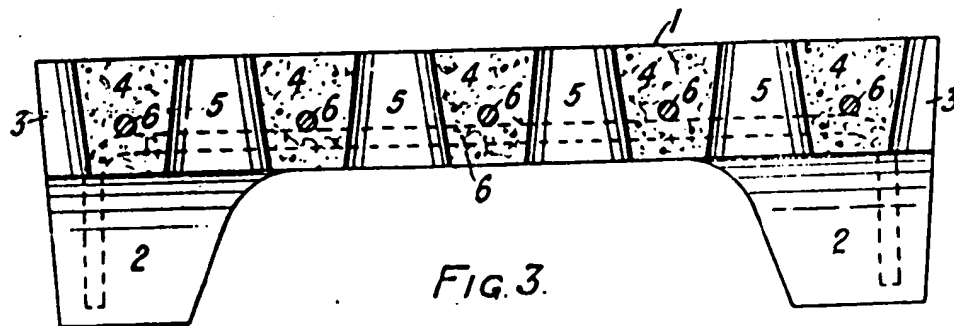


FIG. 3.

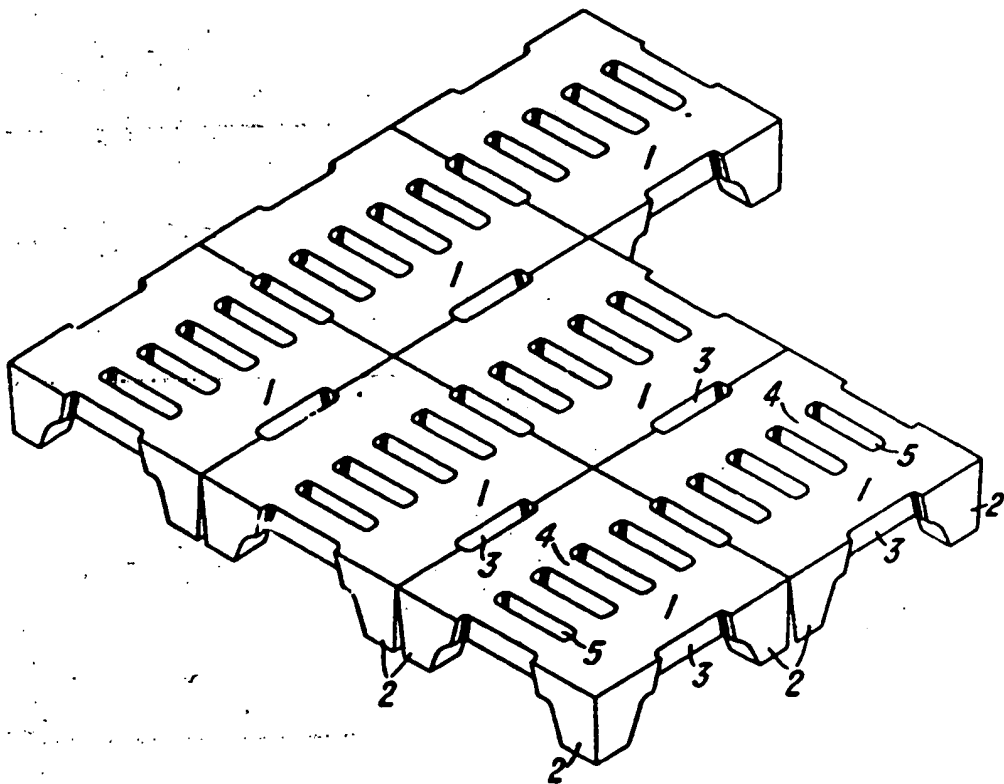


FIG. 4.

BEST AVAILABLE COPY